Autism and careers in cyber security:
A short guide for employers

> *"Only 16% of adults with autism are in full time employment yet we know that autistic people have many skills and strengths that employers are looking for. We are delighted to be working with IAAC and through this work we can start to close this employment gap for autistic people and in doing so help employers to recruit from a pool of untapped talent and close the skills gap in their industry"*
>
> Emma Jones, Partnerships and Employment Training Manager, The National Autistic Society.

Note: This guidance should be read in conjunction with the National Guidance for Employers produced by the National Autistic Society and available at: http://www.autism.org.uk/professionals/employers.aspx The term 'autistic people' used throughout is taken to encompass people on the autistic spectrum, including those with Asperger's syndrome.

Introduction

The inspiration for this guide comes from two commonly expressed views in the cyber security community.

- Firstly, there is the idea that autistic people often have skills that are particularly suited to working in cyber security and IT more generally.

- Secondly, that the IT sector already has a large number of autistic people working in it, many of whom have gone undiagnosed or not disclosed their condition.

Ultimately, it is hoped that this guidance will go beyond allaying concerns and support the employment of skilled autistic people through an autism friendly recruitment process. It is hope that this will help create a positive experience for you and your employees alike. We've developed a FAQ approach based on many of the questions raised during the workshops and research that informed this guide. Sources of further support and guidance are provided at the end.

FAQs

Why should I think about employing autistic people in cyber security?

There are three reasons.

1. The first is to think positively about the skills that many autistic people have or have the potential to develop. Autism is often framed in terms of some of the social, emotional and communication difficulties autistic people face. However, working relationships and environments can be adapted and what may look like barriers can be organised out or mitigated, so that the skills and talents of autistic people can be accessed.

2. The second reason springs from the first. If there is a skills shortage, make sure you do everything you can to have the right people come forward, recruit and retain them.

3. The third is to support and promote diversity. Simply ensuring that autistic people are not disadvantaged through inadvertently designing cyber security job specifications or practices that make it difficult for an autistic person to be recruited, selected or perform the skills they have and you need. This is no different from any other aspect of equality, diversity and approaches to physical disability.

Why might autistic people have suitable skills for working in cyber security?

It is common today for recruiters to advertise cyber security jobs or select people that require all-round skills such as deep technical knowledge and soft skills like teamwork, organisation, communication, problem-solving, determination and enthusiasm.

It might be tempting to assume that autistic people will be good on technological skills but poor on soft skills. However, this assumption may or may not be correct when autistic people are viewed as individuals, just as the assumption may or may not be correct for individuals who are not autistic.

It really helps to look at the common traits of autism positively and to focus on attracting individuals that would otherwise be missed. Listed below are the common strengths of Autistic people:

- **Attention to detail**
- **Methodological approach**
- **Good memory for factual information**
- **Strong problem solving skills**
- **Strong numerical skills**
- **Different ways of thinking or neuro-diverse**
- **Specialist knowledge and skills**

- **Pattern recognition**
- **Reliable**
- **Resourceful**

A casual reading of these strengths inspires a host of skills that can translate to proficiency, dedication, and enthusiasm in cyber skills. A cyber security analyst who wishes to understand an innovative cyber-attack needs these strengths. Someone searching for vulnerabilities in lines of code needs these strengths. Security teams that need to think in different ways from conventional practice, need people with neuro diverse strengths.

What adjustments should I make to my recruitment processes?

There are two adjustments that the recruitment process can enable:

Firstly, the recruitment process should not cause people with the right skills to rule themselves out before applying. A job specification must use plain English so that the main purpose of the role is not obscured. A job specification that gives undue weight to skills other than those that are really needed makes it hard to judge what the employer is looking for.

For example, a job specification for a vulnerability assessor may have a few short bullets on 'assessing' but then a dozen bullets on imagination, communication, independence and so forth. **To avoid this:**

- Keep job description in simple English and focused.
- Weight the qualities to indicate the main focus of the role.
- Be absolutely sure about what is essential and what is desirable.
- State that applications from autistic people and other Under-represented people are welcomed.
- Avoid overblown statements about the company and the ideal applicant.

Secondly, cyber security jobs are largely competency based, something that isn't readily identifiable in traditional interviews or adversarial settings that heighten the anxiety of an autistic person. Try to reduce anxiety by giving the candidate the opportunity to show what they can do, or have the potential to do. **For example:**

- Provide questions in advance of an interview process.
- Provide images or video of your workplace so that people can visualise the environment ahead of time.

- Avoid hypothetical questions. It is much more useful to draw on past experience rather than future. For instance, questions about situations that the individual hasn't experienced requires them to imagine a situation they haven't directly experienced. This is unnecessarily complex so; for example, a question that starts 'imagine you are working away on a client site and you discover a vulnerability on the network' can be altered to 'Please tell me about a time when you discovered a vulnerability on a network. What did you do to resolve it?'

- Work through a real world problem with them. Talk about how they approach the problem and the way they work as they go through the exercise, or afterwards.

- Investigate if services such as the gamification approach being developed by Cyber Challenge Ventures, the trading arm of Cyber Security Challenge UK, might be used as part of the recruitment process.

For further information see:
https://cybersecuritychallenge.org.uk and
www.cyberchallengeventures.com

What adjustments can I make to accommodate and help autistic people succeed in work?

Guidance from the National Autistic Society provides generic strategies for adjustments at work. However, there are some attributes of work in security that are worth considering. As routine is important to many autistic people, sudden changes of plan can increase anxiety. For example, in a fast paced security consultancy practice where resources and schedules can change quickly, it will be important to provide as much notice as possible. It is not so much that change can't be managed, but rather a question of notice and description. It may be that an individual is not able to change location at short notice, but could be able to compile detailed reports quickly, depending on their individual skills and competence. Work with routine, even if that routine is processing fast moving security incidents, will provide a stable working environment.

Lighting, sound, temperature and distractions in a workplace dominated by information technology and large offices can be easily managed with a person's preferences in mind. This could range from the use of headphones in a busy open office, to sunglasses reducing glare from artificial lighting. The candidate's preference can easily be established as part of the induction process and need not mean radical change for everyone in the workplace.

What specific factors do SMEs need to think about?

SMEs might be put off sometimes by guidance that seems to necessitate a large HR department and support network of mentors and others. Whilst this can provide considerable benefits for an autistic person, a large organisation can also be over-whelming for some autistic people (or anyone). On the other hand, a small business may provide more tailored circumstances amongst a friendly, transparent and knowledgeable set of colleagues. There are no rules that fit every individual, so often SMEs can benefit from the skills and potential that autistic people bring.

How do I manage an autistic person who displays performance or disciplinary issues?

This guide has tried to focus on the positive aspects of autism. However, there will inevitably be some circumstances in which performance becomes an issue, much as could potentially be the case with any other employee. We have, however, found a fear among some employers learning about autism that they may face litigation based on discrimination or may be labelled intolerant of autism.

In reality, when it comes to performance and discipline, all employees are expected to perform and behave to appropriate standards in their role. The process for managing performance and discipline is in many ways the same for anyone and as is normal in most workplaces, needs to be managed carefully to ensure that allowances are made for personal circumstances. Indeed under the Equality Act 2010 employers are obliged to provide Reasonable Adjustments to support the employee. If all avenues have been exhausted then exactly the same disciplinary processes apply.

What if I suspect I have autistic people already in my workforce? (Undiagnosed or undisclosed).

The recruitment of a person who has declared that they have autism is perhaps easier to manage than handling an undisclosed or undiagnosed issue at work. This is because disclosed autism can be overtly managed, supported and resources rallied amongst the staff who need to know. However, at the time of writing, people over 30 are more likely to not have had a formal diagnosis, and because the IT sector is estimated to have a higher proportion of autistic people working in it than in other sectors, then we have to mention those circumstances here.

Fortunately, there are many adjustments that can be made irrespective of a formal diagnosis. Indeed, the employee in question need not have to know about them. They would simply appreciate your advance notice of an upcoming change, for example. It is a difficult question to raise with an individual, but as part of those sometimes difficult discussions relating to relationships performance and discipline, a knowledge of autism may help inform your decision-making, guidance and management without specifically broaching the condition. It may even help you explain or assess your own personal outlook and circumstances. You will have to use your judgement as to how far you raise this as a specific issue with your employee, knowing them as you do. The NAS have some information available to help support broaching the subject:

www.autism.org.uk/about/what-is/broaching.aspx

How do I access autistic people in the cyber security recruitment market?

The easy answer to this is to think about making your recruitment processes and working practices autism friendly - autistic people will apply! However, if you want to go further and seek out autistic people with skills, then think about working with local schools where autistic people may be in mainstream or specialist education. Offer placements and work experiences. There are also a range of organisation that you can contact, starting with the National Autistic Society website.

Where can I get more information and support?

Sign up to **The National Autistic Society's monthly 'Autistic Talent' newsletter:**
www.autism.org.uk/professionals/employers/sign-up.aspx

For further advice and guidance contact the National Autistic Society:
www.autism.org.uk/professionals/employers.aspx

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www.autism.org.uk
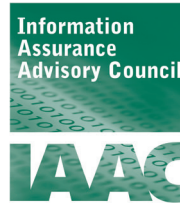
"**The Information Assurance Advisory Council (IAAC)** is a unique 'not for profit' body that brings together a community of some 600 professionals. This includes corporate leaders, government officials, members of the defence, security and law enforcement communities, academics, scientists and technical experts, in order to address the information assurance and related challenges faced by the 'Information Society'. IAAC was founded in 1999. Since then it has been at the leading edge of many of the developments in Information Assurance and Cyber Security thinking in UK, maintaining a non-partisan position on matters affecting the way society uses and protects information." **www.iaac.org.uk**

Cyber Security Challenge UK is a series of national competitions, learning programmes, and networking initiatives designed to identify, inspire, and enable more people to become cyber security professionals. Established to bolster the national pool of cyber skills, it offers a unique programme of activities to introduce sufficient numbers of appropriately skilled individuals to learning and career opportunities in the profession.

Our Sponsors demonstrate exceptional commitment to the Challenge initiative, providing considerable financial and other support to help the Challenge achieve its aims and objectives. They are a driving force working to help safeguard UK cyberspace and are a cornerstone within the trusted Challenge community. **https://cybersecuritychallenge.org.uk/about**

National Autistic Society: "We are the leading UK charity for autistic people (including those with Asperger syndrome) and their families. We provide information, support and pioneering services, and campaign for a better world for autistic people."

CREST: "CREST is the not-for-profit accreditation and certification body representing the technical information security industry. CREST provides internationally recognised accreditation for organisations and individuals providing penetration testing, cyber incident response and threat intelligence services."